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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/039,072 03/13/98 SASAKI

A P/1878-109

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TM02/0523

EXAMINER

GRIER, L

ART UNIT

PAPER NUMBER

2644

DATE MAILED:

05/23/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

SK

Office Action Summary

Application No.

09/039,072

Applicant(s)

SASAKI, ATSUSHI

Examiner

Laura A Grier

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

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DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because of the phrase "the present invention". The examiner suggests that the paragraph begin as follows: "A loudspeaker unit...". Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claim 1** is rejected under 35 U.S.C. 102(b) as being anticipated by Kuusama et al. (U. S. Patent No. 5559891).

Regarding **claim 1**, Kuusama et al. discloses a device to be used for changing the acoustic properties of a room. Kuusama et al. discloses in figure 7 a microphone (1) for sensing components in the environment of a room, which constitutes for components such as sound reproduced by the loudspeaker (2), digital signal processor, indicative of a processing means of an output from the microphone, and a sound source (sound reproduction equipment –5), with reference to frequency and reverberation characteristics having a delay time, a power amplifier (69), indicative of an amplifier. (Abstract, and column 4, lines 41-67 and column 5, lines 1-5).

Regarding **claims 4, 6 and 8**, the claimed limitations are disclosed in figure 8,

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and columns 4-5, lines 59-67 and 1-5, respectively.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. **Claim 1** is rejected under 35 U.S.C. 102(b) as being anticipated by Rao (U. S. Patent No. 6141415).

Regarding claim 1, Rao discloses method and apparatus for detecting speech at a near-end of a communications system, a speaker-phone system, or the like. Rao's disclosure teaches in figure 2 (column 5, lines 57-67 and column 6, lines 1-3) a system indicative of a microphone (80) for detecting sound from a loudspeaker (75), a processing means (51) for comparison analysis indicative of comparing output from a microphone from a sound source (indicated by a reference 42) in relation to frequency characteristics and echo properties, thus providing a corrected signal for output, an power amplifier (73).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claim 2** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuusama et al.

Regarding claim 2, Kuusama et al. discloses everything claimed as applied above (see claim 1). Kuusama et al. further discloses a first A/D converter, memory, means indicative of a successive comparison analysis part, regenerative signal processing, and a D/A converter (columns 4-5, lines 59-5 and figure 8). However, Kuusama et al. fails to specifically disclose a second A/D converter. I would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Kuusama et al. by providing a second a/d converter to the circuitry for purpose of separately converting the output signal of the microphone, further wherein the technique of providing various numbers of A/D or D/A converters for efficient processing an audio signal is well known in the art.

Regarding **claims 5, 7 and 9**, the claimed limitations are disclosed in figure 8, and columns 4-5, lines 59-67 and 1-5, respectively.

Response to Arguments

8. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argued that the prior art previously used providing teachings of the processing means as specifically claimed and also that the sound source was not an audio device, nevertheless, the sound a person speaking is source of audio and thus constitutes as a sound source. As provided the claims may be interpreted as a forming of echo canceling. However, the examiner has provided new references, which support the claims as amended.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on Monday–Friday 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

LAG *LAG*
May 21, 2001


FORESTER W. ISEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2700